CALIFORNIA ENVIRONMENTAL QUALITY ACT
FINDINGS OF FACT
(PUBLIC RESOURCES CODE §21081, CEQA GUIDELINES §15091)
REGARDING THE FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE FRESNO CANYON FLOOD MITIGATION PROJECT
State Clearinghouse Number 2013031072

INTRODUCTION

The Final Environmental Impact Report (Final EIR) prepared for the Fresno Canyon Flood Mitigation Project (Project) analyzes the potential environmental impacts associated with the construction of a new bypass storm drain facility to transport floodwaters, sediment, and debris from Fresno Canyon to the Ventura River. The purpose of the Project is to reduce the risk of flooding in the community of Casitas Springs and potential closures of, and damage to, State Route 33 caused by flooding.

These Findings of Fact (Findings) have been prepared to comply with requirements of the California Environmental Quality Act (CEQA, Public Resources Code § 21000 et seq.) and the *State CEQA Guidelines* (Cal. Code Regs., Title 14, §15000 et seq.). Pursuant to CEQA § 21081 and *State CEQA Guidelines* § 15091, no public agency shall approve or carry out a Project where an EIR has been certified, which identifies one or more significant impacts on the environment that would occur if the Project is approved or carried out, unless the public agency makes one or more Finding for each of those significant impacts, accompanied by a brief explanation of the rationale of each Finding. The possible Findings, which must be supported by substantial evidence in the record, are:

1. Changes or alterations have been required in, or incorporated into, the Project that mitigate or avoid a potentially significant impact on the environment.
2. Changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
3. Specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or Project alternatives identified in the EIR.

PROJECT DESCRIPTION

Project Location

The Fresno Canyon Flood Mitigation Project is located in the community of Casitas Springs, approximately 1 mile south of Oak View and 5 miles north of the City of San Buenaventura, in the unincorporated area of Ventura County, California. The Project site is located approximately 0.75 mile northwest of the State Route (SR) 33/Casitas Vista Road intersection. (Figure 3.0-1, Regional Map in the Draft EIR, illustrates the location of the Project within the region, and Figure 3.0-2, Project Site and Vicinity in the Draft EIR, shows the Project site and surrounding areas.)

Fresno Canyon is a tributary to the Ventura River, with a drainage area of almost 1,100 acres with a 100-year peak clear flow of 1,453 cubic feet per second (cfs). The upper half of this watershed is on steep, highly erodible slopes heavily grown with trees and brush. The bulking factor used for the 100-year flow is 1.57 bringing the bulked 100-year peak flow to 2,281 cfs. The existing lower Fresno Canyon flood control channel, a 750-foot concrete channel, was built in the late 1960s to convey Fresno Canyon runoff from the natural channel to the Ventura River and was designed for a clear flow of 700 cfs, which was considered to be the 50-year event at the time.

The Ventura County Watershed Protection District (VCWPD) has acquired three parcels currently occupied by single-family residential development in order to allow for a right-of-way that has the proper alignment for the conveyance pipeline. The early acquisition of right of way for this Project has not influenced the environmental assessment, including the decision relative to the need to construct the Project or the selection of a specific location.

Project Characteristics

VCWPD proposes to construct a storm drain diversion facility to transport floodwaters, sediment, and debris from Fresno Canyon to the Ventura River to reduce the risk of flooding in the community of Casitas Springs. The facility will be designed to convey the fully bulked flows resulting from the 100-year flood event by constructing a 12-foot-diameter reinforced concrete (RC) conveyance pipe installed via horizontal boring beneath SR-33 and via open trench method for the remaining approximately 395 linear feet.

The proposed facilities that would be constructed in the Project area shown in Figure 3.0-3, Project Plan in the Draft EIR. At the upstream end, the Project design includes a 265-foot floodwall above the northwest bank of the existing natural canyon. To protect the floodwall from potential scour damage, ungrouted rock riprap would be placed on the adjacent portion of the northwest bank. The inlet consists of a 50-foot-long rock riprap trapezoidal channel with 2:1 horizontal to vertical (2H:1V) side slopes (50-foot top width, 11-foot bottom width) and approximately 100 linear feet of RC transition structure adjacent to the existing detention basin. The existing detention basin would no longer be required with the proposed diversion system, and the basin would be filled to the original surrounding ground contours. The new 12-foot-diameter RC pipe is designed to carry bulked flow.

Where the proposed diversion and existing channel diverge, a notch in the north RC channel wall would allow emergency overflows to leave the diversion channel and enter the existing channel. Concreted rock riprap would be placed in the existing channel for a length of 40 feet to protect against erosion and would essentially function as an emergency spillway. This modified existing channel section would be trapezoidal with 2H:1V side slopes, top width of 51 feet, and bottom width of 15 feet.

The transition structure connects to approximately 580 linear feet of 12-foot diameter RC pipe which would be jacked under SR-33 using a horizontal boring method (avoiding the need to detour traffic on SR-33 during construction). The jacking would be continued for about 145 linear feet west of SR-33, where the pipe would be day-lighted and then installed by open trench method for the remainder of the distance (i.e., approximately 395 feet) to the outlet apron comprised of one-ton ungrouted rock riprap to be constructed on the left bank of the Ventura River. The existing retaining wall located along the base of slope at the terminus of Edison Drive would be removed and a new retaining wall (of varying height) would be constructed along the pipe conveyance alignment (Figure 3.0-3 in the Draft EIR).

A 120-foot-long by 6-inch-wide RC retaining wall (height varies) would be installed along the western edge of the Ojai Valley Trail beginning about 70 feet north of and ending about 35 feet south of the conveyance pipe. The retaining wall is required to support the trail, a portion of which would need to be elevated to clear the proposed 12-foot-diameter pipe. The wall would include an underground RC footing for proper anchoring.

Immediately west of the Ojai Valley Trail, the pipe would connect to a 40-foot-long trapezoidal outlet apron on the east bank of the Ventura River. The apron would comprise one-ton ungrouted rock riprap and would be 30 feet wide at the invert, 50 feet wide at the top, and 4 feet deep. A 4-foot-wide ungrouted rock cutoff wall that would extend 5 feet deeper underground would further stabilize the downstream edge of the outlet apron, increasing the total depth of rock at this edge to 9 feet. The ground immediately

west of the outlet apron would be bladed or graded for approximately 70 feet to facilitate flows from the facility into the Ventura River.

The outlet apron would tie into adjacent higher ground by continuing the ungrouted one-ton rock riprap and leading edge rock cutoff wall to the immediate north for a distance of 70 feet. To the south, a 4-foot thickness of ungrouted one-ton rock would curve over a distance of about 40 feet to match the existing east bank of the Ventura River. The rock bank protection toe would be buried 9 feet below the bottom. A 3-foot-wide by 5-foot-deep ungrouted 1-ton rock cutoff wall would further stabilize the downstream end of the bank protection, increasing the overall depth of rock to 9 feet at that location.

A pair of existing 42-inch corrugated metal pipe culverts conveying flow from private property east of the Ojai Valley Trail would be replaced with a single 48-inch RC pipe terminating at the proposed outlet.

To prevent the backwater effect from the Ventura River in the existing flood-control channel, a flapgate would be constructed at the outlet of the existing flood-control channel that would prevent river water from traveling up the channel.

The existing 36-inch Parkview Drain located southeast of SR-33 would be connected to the new Fresno Canyon conveyance structure.

The proposed Project would require relocation of the existing 21-inch sewer line operated by the Ojai Valley Sanitation District (OVSD). As part of the project, a new sewer line would be constructed 1 to 2 feet north of the existing line to allow for OVSD access and maintenance. The old line would be abandoned in place. A new sewer manhole would be added at the end of Edison Drive and another manhole would be added along the sewer line just west of the Ojai Valley Trail and south of the new outlet.

The Project would include two maintenance roads. A 15-foot-wide maintenance access road would extend from SR-33 west along the top of the buried RC pipe alignment to the outlet structure. The road would be surfaced with 6-inch aggregate base. A vehicle turn area would be created on uplands north of the outlet structure to facilitate maintenance of the outlet invert. The voids within a 15-foot-wide portion of the ungrouted rock on the outlet structure's north slope would be filled with 6-inch aggregate base to create a drivable ramp from the turn area down to the outlet invert. The access ramp would lie adjacent and parallel to the Ojai Valley Trail. A second maintenance road would be constructed at the eastern end of the facility and immediately north of the proposed floodwall. It would be approximately 265 feet long and connect to an existing access route from SR-33.

To summarize, Project construction features include:

- New inlet structure with emergency spillway/rock riprap protection in Fresno Canyon, upstream (east) of SR-33;
- Flood wall and adjacent rock riprap revetment along the northwest bank of the existing natural canyon (about 242 feet long);
- 12-foot diameter RC conveyance pipe (approximately 975 feet long);
- RC retaining wall with footing along the west edge of the Ojai Valley Trail (about 120 feet long);
- Outlet facility with tie-in to adjacent high ground on the north and south, cut-off wall along the west edge, and cut-off wall at the downstream edge of the south tie-in, all consisting of ungrouted one-ton rock riprap;

- Graded flow path extending 70 feet westward from the outlet facility;
- New RC pipe culvert to replace existing culverts draining private property east of the Ojai Valley Trail;
- Maintenance road from SR-33 west to the outlet structure with turn area on uplands immediately west of the Ojai Valley Trail;
- Maintenance road for access from SR-33 east to the new inlet;
- Flapgate on existing Fresno Canyon outlet.

PROJECT OBJECTIVES

The Ventura County Watershed Protection District's (District) purpose for implementing the Fresno Canyon Flood Mitigation Project is to provide flood control protection for the residents and properties located in Casitas Springs from a 100-year flood. The primary objectives of the Project are:

- Flood protection – improve storm flow conveyance from Fresno Canyon to provide capacity for 100-year fully bulked flood flows to protect residents and properties in Casitas Springs;
- Minimize impacts to SR-33, both emergency closings due to flooding and potential temporary impacts during Project construction, since SR-33 is a major arterial between the Ojai Valley and Highway 101 in Ventura;
- Minimize effects on water quality of the Ventura River and minimize potential adverse impacts to special-status species, especially the Endangered Southern California steelhead trout.

DISCRETIONARY APPROVALS

Agency	Discretionary Approval	Description
United States Army Corps of Engineers (USACE)	Section 404 Clean Water Act (CWA) Individual Permit and/or qualification under Nationwide Permit	Projects that include potential discharge of dredge or fill impacts to the "waters of the US" (including wetlands) are subject to Section 404 of the CWA, requiring a permit.
United States Fish & Wildlife Service (USFWS)	Section 7 Consultation	Required for any activity that may affect federally listed species. Section 7 consultation will address entire project and incidental take as part of the project.
National Marine Fisheries Service (NMFS)	Section 7 Consultation	Required for any activity that may affect federally listed species. Section 7 consultation will address entire project and incidental take as part of the project.
California Department of Fish and Wildlife (CDFW)	Section 1600-Series Streambed Alteration Agreement (SAA)	Required for any activity that will: • Substantially divert or obstruct the natural flow of any river, stream, or lake; • Substantially change or use any material for the bed, channel, or bank, of any river, stream or lake; or • Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.
	Section 2081 Take Permit	CDFW will issue a Section 2081 permit for the incidental take of State listed threatened and endangered species only if specific criteria are met. These criteria are reiterated in Title 14 CCR, Sections 783.4(a) and (b).
Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification	Projects discharging fill and dredged materials to wetlands, riparian areas, and headwaters.
California Department of Transportation (Caltrans)	Section 660 of the California Streets and Highways Code	A Project requires a Caltrans encroachment permit for installation of highway encroachments, defined as including "any ... pipe, pipe line ... which is placed in, under or over any portion of the highway."

RECORD OF PROCEEDINGS

For purposes of CEQA and these Findings, the record of the administrative proceedings for the Project includes, but is not limited to, the following documents:

- The March 25, 2013, Notice of Preparation (NOP) and Initial Study issued by the District in conjunction with the project;
- The December 2013 Draft EIR, including appendices and technical studies included or referenced in the Draft EIR (SCH No. 2013031072).
- The April 2014 Final EIR;
- All comments submitted by agencies or members of the public during the minimum 45-day public comment period on the Draft EIR (December 17, 2013 through January 30, 2014), and the District's responses to the comments;
- All other comments and correspondence submitted to the District with respect to the project;
- The Mitigation Monitoring and Reporting Program (MMRP) for the project;
- All Findings and resolutions adopted by the District in connection with the project, and all documents cited or referred to therein;
- All reports, studies, memoranda, maps, staff reports, or other planning documents relating to the Project and/or cited in the EIR;
- All documents and information submitted to the District by responsible, trustee, or other public agencies, or by individuals or organizations, in connection with the project, up through the date the Board of Supervisors approves the project;
- Matters of common knowledge to the District, including, but not limited to federal, state, and local laws and regulations;
- Any documents expressly cited in these Findings; and
- Any other materials required to be in the record of administrative proceedings pursuant to Public Resources Code § 21167.6, subdivision (e).

The District has considered and relied on all of the documents listed above in reaching its decision on the Project.

The custodian of the documents comprising the record of administrative proceedings is the District:

Ventura County Watershed Protection District
Elizabeth Martinez, Environmental Planner
800 South Victoria Avenue
Ventura, California 93009

and

Clerk of the Board of Supervisors
of the Ventura County Watershed Protection District
Hall of Administration

FINDINGS REQUIRED UNDER CEQA

CEQA § 21002 provides that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." The same statute states that the procedures required by CEQA "are intended to assist public agencies in systematically identifying both the significant effects of projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects." Section 21002 goes on to state that "in the event [that] specific economic, social, or other conditions make infeasible such Project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects."

To the extent that these Findings of Fact conclude that various proposed mitigation measures outlined in the Final EIR are feasible and have not been modified, superseded, or withdrawn, the District hereby binds itself to implement these measures. These Findings, in other words, are not merely informational, but rather constitute a binding set of obligations that have come into effect with the District's Board of Supervisors formal approval of the Project.

The mitigation measures and/or the design features and construction measures are referenced in the MMRP adopted concurrently with these Findings, and will be implemented through the final design, construction, and post construction periods.

MITIGATION MONITORING AND REPORTING PROGRAM

An MMRP has been prepared for the Project and has been adopted concurrently with these Findings as required by CEQA § 21081.6(a)(1). The District will use the MMRP to ensure compliance with Project mitigation measures.

SIGNIFICANT EFFECTS AND MITIGATION MEASURES

The *CEQA Guidelines* define a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (Section 15382). The Final EIR identified several potentially significant environmental impacts resulting from implementation of the Project. However, these potentially significant impacts can be fully mitigated through the adoption of feasible mitigation measures. Additionally, the Final EIR determined that the Project would not result in unavoidable significant impacts. The potentially significant environmental impacts of the Project are described below along with the District's Findings with respect to each of the potentially significant environmental impacts of the Project following the implementation of feasible mitigation measures.

A. AIR QUALITY (FINAL EIR Section 4.2)

Emissions and Fugitive Dust

> **Construction Impact:** During grading and construction of the project, air emissions (reactive organic compounds [ROC], nitrogen oxides [NO_X], and carbon monoxide [CO] in particular) would be generated by heavy-duty construction vehicles, construction worker vehicles, and energy use during the construction phase. In addition to grading and construction vehicle emissions, fugitive dust (PM10 and PM2.5) would also be generated during grading and construction activities. While much of this airborne dust would settle out of, or near, the development area, smaller particles would remain in the atmosphere, increasing existing particulate levels within the surrounding area. Regular watering of unpaved areas, which is one

of the Ventura County Air Pollution Control District (VCAPCD) recommended measures, can reduce expected fugitive dust emission by 50 percent.[1] With the implementation of the other recommended measures as identified by the VCAPCD, fugitive dust would be further reduced.

The construction period for the Project is anticipated to begin in April 2015 and last approximately eight months. The construction schedule and equipment list for each activity was input into the California Emissions Estimator Model (CalEEMod). Construction equipment was assumed to be stored on-site in the staging areas during construction to minimize disruption of the surrounding land uses.

Table 4.2-5, Estimated Construction Emissions in the Draft EIR, identifies estimated daily emissions that are associated with construction. These estimates are based on the expected location, size, and development of the project. The analysis assumes that all of the construction equipment and activities would operate continuously for 8 hours each day and that activities (e.g., demolition, grading, construction, and asphalt paving) would overlap, as indicated in the construction schedule. The values presented in Table 4.2-5 represent the maximum daily emissions occurring at any time during the entire construction period.

The primary construction-related source of CO, NO_x, and ROC emissions is heavy construction equipment. Construction emissions of CO, NO_x, and ROC are not counted toward the adopted significance thresholds because VCAPCD considers them temporary. However, VCAPCD recommends mitigation if the proposed Project could exceed the daily threshold of 25 pounds per day. As shown in Table 4.2-5, NOx and CO emissions would exceed this threshold during Project construction.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Air Quality related to emissions and fugitive dust identified in the EIR.

Mitigation Measures

4.2-1: All Project construction and site preparation operations shall be conducted in compliance with all applicable VCAPCD Rules and Regulations with emphasis on Rule 50 (Opacity), Rule 51 (Nuisance), and Rules 55 (Fugitive Dust) and 55.1 (Paved Roads and Public Unpaved Roads), as well as Rule 10 (Permits Required). The following specific dust control measures, unless more strict measures are implemented for VCAPCD rule compliance, shall be implemented:

- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
- Pre-grading/excavation activities shall include watering the areas to be graded or excavated before grading or excavation operations commences. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
- All trucks shall be required to cover their loads as required by *California Vehicles Code* § 23114.

[1] US Environmental Protection Agency, *Compilation of Air Emissions Factors*, *Volume I: Stationary and Point Sources*, AP-42, (1985).

- All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization material, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
- Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally safe dust suppressants to prevent excessive fugitive dust.
- Signs limiting traffic to 15 miles per hour or less shall be posted on-site.
- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use discretion in conjunction with the VCAPCD in determining when winds are excessive.
- A properly functioning and well-maintained track-out control device(s) shall be installed to prevent track-out of soil onto paved public roads.
- Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day if visible soil material is carried over to adjacent streets and roads.
- Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

4.2-2: During construction contractors shall comply with the following measures, as feasible, to reduce NO_x and ROC from heavy equipment as recommended by the VCAPCD in its *Ventura County Air Quality Assessment Guidelines*:

- Minimize equipment idling time.
- Maintain equipment engines in good condition and in proper tune as per manufacturer's specifications.
- Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.
- All off-road diesel engines not registered under California Air Resources Board's Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower or more, shall meet, at a minimum, the Tier 3 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Section 2423(b)(1). If a Tier 3 or Tier 3-equivalent engine is not available for a particular item of equipment, Tier 2 compliant engines shall be allowed on a case-by-case basis, as determined by VCWPD.

Facts in Support of Finding: Implementation of mitigation measures 4.2-1 and 4.2-2 requires compliance with all applicable VCAPCD Rules and Regulations with emphasis on Rule 50 (Opacity), Rule 51 (Nuisance), and Rules 55 (Fugitive Dust) and 55.1 (Paved Roads and Public Unpaved Roads), as well as Rule 10 (Permits Required), thus reducing the amount of ROCs, NOx, CO, and fugitive dust (PM10 and PM2.5) released as a result of Project construction. Following the implementation of mitigation measures 4.2-1 and 4.2-2, Air Quality impacts related to emissions and fugitive dust would be less than significant.

B. BIOLOGICAL RESOURCES (FINAL EIR Section 4.3)

Plants

No special-status plant species were observed during site surveys and none are considered to have a high potential for occurrence within the proposed disturbance area of the project, due to a lack of suitable habitat or other site specific factors (e.g., disturbance level, land use, etc.). However, focused rare plant surveys were not conducted during the expected blooming period so a full determination of their presence or absence is not known. Therefore, impacts to rare plant species are considered potentially significant without mitigation.

Sensitive Wildlife Species

Construction Impacts: Project construction could directly and indirectly impact sensitive zoological species, as discussed below.

Southern California steelhead DPS (Federally Listed Endangered Species, California Species of Special Concern). Steelhead trout have been divided into Distinct Population Segments (DPSs). In general, adult steelhead return to rivers and creeks in the region from January to April. Spawning takes place in the rivers from January to May with most spawning activity occurring between January and March. Because of the proximity of the Project to the Ventura River and its associated riparian zone, the proposed Project would have the potential to adversely affect individuals of the Southern California steelhead DPS during Project construction.

Other potential impacts include "capture" of the Ventura River low flow channel along the rip-rap bank protection and alteration of the large pool adjacent to the proposed outlet.

The proposed Project includes the installation of a flapgate at the western end of the existing flood-control channel to protect against backflow from the Ventura River. The flapgate would prevent fish from gaining access to the existing concrete channel and the replaced local drainage outlet connecting the Ventura River to Fresno Canyon east of SR-33. Therefore, take at this location would not be expected to result from Project operation during high floods.

Upon completion of review of the FEMA Biological Assessment, NMFS is expected to require specific mitigation measures to reduce potentially significant impacts to this species. Though these specific measures have not yet been outlined, Mitigation Measure 4.3-2 discusses the avoidance measures required to prevent and/or reduce the potential of incidental take of this species. Specific conditions and or measures identified within the NMFS final determination shall also be followed. In the event of conflicting requirements, the NMFS conditions shall take precedence.

California red-legged frog (federally listed Threatened Species, California Species of Special Concern). This is the largest native frog in the western United States. California red-legged frogs can be found in a range of habitats within a watershed (e.g., stock ponds, creeks). The Project area

does not occur within the final approved Critical Habitat for this species, but there are patches of habitat within and immediately adjacent to the Ventura River and within the Project zone that are suitable for this species. As such, the January 2010 Biological Opinion (BO) prepared by the US Fish and Wildlife Service for this Project includes California red-legged frog in its evaluation.

Southwestern willow flycatcher (federally listed Endangered Species, state-listed Endangered Species). This small flycatcher is closely associated with riparian woodlands. There are some suitable riparian woodlands along the Ventura River in and near the Project area. However, no willow flycatchers have been recorded in this area in the California Natural Diversity Database (CNDDB). Therefore, they are considered to have a moderate potential for occurrence. The BO prepared by the US Fish and Wildlife Service for this Project includes southwestern willow flycatcher in its evaluation. The BO authorized the Project to proceed with several conditions.

Least Bell's vireo (federally listed Endangered Species, state-listed Endangered Species). This small vociferous bird is most commonly associated with riparian scrub habitat where it builds well-camouflaged nests. Where it does occur, it is often relatively abundant, but suitable habitat for this species in Southern California has declined significantly in the past several decades. Suitable habitat for this species is present on-site and the species has been documented as occurring in the region. As such, there is a high potential for least Bell's vireo to occur within the Project area. The BO prepared by the US Fish and Wildlife Service for this Project includes least Bell's vireo in its evaluation. The BO authorized the Project to proceed with several conditions.

Because suitable habitat for California red-legged frog, southwestern willow flycatcher, and least Bell's vireo is present within the Project area, and because focused presence/absence surveys for these species have not been conducted on-site, Project impacts to each of these three listed species would be considered potentially significant without mitigation. The BO prepared by the USFWS for this Project evaluated the potential impacts to California red-legged frog, southwestern willow flycatcher, and least Bell's vireo. Within the BO, USFWS has authorized the Project to proceed with conditions.

Nuttall's woodpecker (CDFW Special Animal). This smaller, though vociferous woodpecker is most commonly associated with oak woodlands in California. Although associated with oaks, they do not eat acorns, but rather insects and sometimes fruit. They nest in tree cavities and two Nuttall's woodpeckers were observed during the surveys on-site. This species is expected to nest and reside within the Project area.

Cooper's hawk (CDFW Watch List). Cooper's hawks most commonly hunt other bird species while in flight. They typically nest in or near riparian areas in trees with dense canopy. Suitable nesting and foraging habitat is present on-site for this species to persist and is, therefore, is considered to have a high potential for occurrence in most portions of the Project area.

Nuttall's woodpecker and Cooper's hawk may utilize either or both of the riparian woodland or oak woodland habitats occurring within the Project zone. CDFW is primarily concerned with tracking and protecting nesting locations of these species. Both of these species are also protected while actively nesting by the Migratory Bird Treaty Act and Fish and Game Code. As such, if the Project were to be initiated during the nesting season, impacts to Nuttall's woodpecker and Cooper's hawk, as well as any other actively nesting migratory bird, would be considered potentially significant without mitigation.

Hoary bat (CDFW Special Animal). Though one of the most widespread bat species in the world, and common in California, this species has been added to the CDFW Special Animal list

as they wish to collect data on the species to determine their current population status. They are a solitary species and are closely associated with trees; usually broadleaf deciduous species. They usually feed on insects along open edges of woodlands. There is suitable habitat on-site within the wooded areas. Therefore, they are considered to have a high potential for occurrence.

Pallid Bat (California Species of Special Concern). This species of bat is relatively common in the region. It is known to forage in and around arid to semi-arid grasslands, woodlands, and forests with open areas. It typically roosts in rocky areas with suitable crevices. Both foraging and roosting habitats occur on and adjacent to the subject site. Though typical roosting habitat does not occur within the Project boundaries, it does occur within the area. Further, suitable foraging habitat is present on-site. As such, pallid bad is considered to have a moderate potential for occurrence.

Both hoary bat and pallid bat may roost within trees on-site and may be impacted by the proposed project. If present, the loss of individuals or occupied roosts of species from the subject property could contribute to the reduction in numbers of a local population and would be considered a potentially significant impact and require mitigation.

Silvery legless lizard, western pond turtle, and two-striped garter snake (California Species of Special Concern). Each of these species have some potential to occur within the project area during certain times of the year. Legless lizards typically occur in shallow, moist soils, often within shrub roots or under leaf litter, pond turtles and two-striped garter snakes are highly aquatic species, requiring perennial or near perennial sources of water. However, during the winter, both of these species may travel from the water sources to estivate, and in the case of turtles, to lay eggs. Conditions within the project site are not ideal for any of these species, however, because there is still a reasonable chance for their occurrence on-site, at least part of the year, project impacts to these species would be considered potentially significant without mitigation.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Biological Resources related to sensitive wildlife species identified in the EIR.

Mitigation Measures

4.3-1: During the appropriate blooming period of the plant species most likely to occur on-site, a focused rare plant survey will be conducted in suitable habitat by a qualified biologist. In the event any special-status rare plants are found, CDFW will be notified regarding the desired disposition of the individual plants. This may include translocation to more suitable habitat or seed collection for the purposes of replanting elsewhere in suitable habitat.

4.3-2: To reduce the adverse effects to the Southern California steelhead DPS during their migration and spawning season, VCWPD shall perform all outlet construction activities outside the migration period. Typically, construction activities would take place between June 15 and October 15. However, because the river may also provide habitat to support federally listed species under USFWS jurisdiction, the work window has been modified to between August 31 and October 31. Work upstream of the proposed outlet would occur throughout the year, depending on nesting bird survey results.

VCWPD shall implement the following measures to avoid and/or minimize the potential for take of steelhead:

- Exclusion fences composed of silt fence material shall be installed at the margins of the work area to prevent workers or construction materials from encroaching into adjacent habitat and to prevent materials from entering the waters of Ventura River. The fence shall be monitored periodically for integrity and effectiveness. The fencing shall be maintained for the duration of construction and removed upon Project completion.

- A NMFS-approved biologist shall monitor construction activities that involve work within the Ventura River, dewatering activities, and installation of the outlet structure for the purpose of identifying and reconciling any condition that could adversely affect listed salmonids or their habitat.

- Preconstruction surveys shall include the collection and relocation of fish, if necessary, by an NMFS-approved fisheries biologist from the construction site prior to and during dewatering. The NMFS-approved fisheries biologist shall be familiar with the life history and identification of steelhead.

- All captured fish shall be held in well-oxygenated water with temperatures equivalent to ambient in stream temperatures. Once recovered, they shall be placed in suitable habitat (in stream cover and pools deeper than 1 foot) downstream of the action area.

- If any steelhead individuals are found dead or injured, the biologist shall immediately contact the NMFS Long Beach Field Office to review the activities that resulted in the take and determine whether additional protective measures are required.

VCWPD shall implement the following measures to protect steelhead critical habitat including prevention of erosion, sedimentation, potential spills, and pollution, and salvage of native vegetation:

- Disturbance to existing grades and vegetation shall be limited to the actual site of the Project and necessary access routes. Placement of all roads, staging areas, and other facilities shall be carried out so as to avoid and limit disturbance to stream bank or stream channel habitat to the extent possible.

- Erosion-control and sediment-detention devices (e.g., well-anchored sandbag cofferdams, straw bales, silt fences) shall be incorporated into the Project design and implemented at the time of construction. These devices shall be in place during construction activities, and after if necessary, to minimize fine sediment and sediment/water slurry input to flowing water and to detain sediment-laden water on-site. These devices shall be placed at all locations where the likelihood of sediment input exists. Supply of erosion control materials shall be available to cover small sites that may become bare and to respond to sediment emergencies.

- VCWPD shall inspect the performance of sediment-control devices at least once each day during construction to ensure that the devices are functioning properly. If a control measure is not functioning properly, the control measure shall be repaired immediately or replaced. Additional controls shall be installed as necessary.

- Sediment shall be removed from sediment controls once the sediment has reached one-third of the exposed height of the control. Sediment collected in these devices shall be disposed of at approved disposal sites away from the collection site.

- All disturbed soils at each site shall undergo erosion-control treatment during construction and after construction is terminated. Treatment may include temporary seeding and sterile straw mulch or other effective measures. Any disturbed soils on a gradient of over 30 percent shall have erosion-control blankets or similar effective measures put in place.

- Any stockpiles of soil used for fill material during construction shall be covered with a tarp or erosion-control blanket, and silt fences shall be installed appropriately to contain soils from moving into area waterways. If the local weather forecast indicates a greater than a 50-percent chance of rain, the Project site shall be "rain-proofed" with erosion-control measures so that no sediment or turbidity enters the stream.

- All debris, sediment, rubbish, vegetation, or other material removed from the channel banks, channel bottom, or sediment basins shall be disposed of at an approved disposal site. All petroleum product chemicals, silt, fine soils, and any substance or material deleterious to listed species shall not be allowed to pass into, or be placed where it can pass into, the stream channel. There shall be no sidecasting of material into any waterway.

- VCWPD shall exercise every reasonable precaution to protect the Ventura River from pollution with fuels, oils, bitumens, calcium chloride, and other harmful materials.

- Construction byproducts and pollutants such as petroleum products, chemicals, fresh cement, or deleterious materials shall not be allowed to discharge into the Ventura River and shall be collected and transported to an authorized disposal area.

- A plan for the emergency cleanup of any spills of fuel or other material shall be prepared and kept available on-site during construction activities.

- Equipment shall be refueled and serviced at designated construction staging areas. All construction material and fill shall be stored and contained in a designated area that is located away from channel areas to prevent transport of materials into adjacent streams. A silt fence shall be installed to collect any discharge, and adequate materials for spill cleanup shall be maintained on-site.

- Construction vehicles and equipment shall be maintained to prevent contamination of soil or water (from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease).

- Good housekeeping practices, use of safer alternative products, such as biodegradable hydraulic fluids, shall be used when feasible.

- An employee-training program shall be implemented. Employees shall be trained to prevent or reduce the discharge of pollutants from construction activities to waters and of the appropriate measures to take if a spill occurs.

- In the event of a spill, work shall be stopped immediately, spill control shall be implemented, and NMFS shall be notified. Work will resume once cleanup is complete, the source of the spill has been resolved, and NMFS has provided authorization to proceed.

- Disturbance to existing grades and vegetation shall be limited to the actual site of the Project and necessary access routes. When possible, existing and proposed ingress or egress points shall be used and the contours of the action area shall be returned to pre-construction condition or better.

- VCWPD shall, to the maximum extent practicable, reduce the amount of disturbance on-site to the absolute minimum necessary to accomplish the proposed action.

- Whenever practicable, existing vegetation shall be salvaged from the footprint of the action area and stored for replanting after earthmoving activities have been completed.

- Because a relatively small amount of riparian scrub vegetation (i.e., 0.30 acre) shall be permanently lost at the outlet location during Project construction, VCWPD shall restore the temporary impact area at a 1:1 ratio through planting willows and other riparian species. For permanent impacts, mitigation shall be implemented at a 3:1 ratio followed by a five-year monitoring period to reach an 80 percent success criterion. Mitigation for permanent impacts may include exotic plant removal and riparian species revegetation, depending on the selected location.

VCWPD shall take measures to prevent the introduction of invasive weeds at the construction site. The measure shall include cleaning all equipment before bringing it on-site and using only certified weed-free erosion-control and revegetation materials.

4.3-3: All measures in the BO to minimize and mitigate impacts to California red-legged frog, southwestern willow flycatcher, and least Bell's vireo shall be implemented. The following measures were taken from the 2009 Biological Assessment, accepted by USFWS, and implemented as conditions within the BO:

California Red-legged Frog

1. Work in the Ventura River will be limited to the period outside of the California red-legged frog breeding and bird nesting seasons. The construction window would be August 31 through October 31.

2. A qualified biologist will conduct pre-construction surveys at least two days prior to start of construction activities in areas where ground disturbance would occur to

determine whether California red-legged frogs are present. If California red-legged frogs are found during any preconstruction surveys, the biologist will contact the Service to determine whether moving them is appropriate. If the Service gives approval for relocation, the Service-approved biologist will be allowed sufficient time to move the California red-legged frogs from the work site before activities begin.

3. A Service-approved biologist will monitor construction activities that involve retaining wall construction and installation of rock slope protection along the Ventura River channel bank. If California red-legged frogs are found that are likely to be killed or injured by work activities, the Service-approved biologist will be allowed sufficient time to move them from the site before work activities resume. The Service-approved biologist will relocate the California red-legged frogs the shortest distance possible to suitable habitat that will not be affected by activities associated with the proposed project. Only California red-legged frogs that are at risk of injury or death by Project activities will be moved.

4. Only Service-approved biologists will participate in activities associated with capture, handling, and monitoring of California red-legged frogs. VCWPD will request and receive Service approval of any other biologist whom the agency wishes to conduct activities with California red-legged frogs.

5. If more than two California red-legged frogs are found dead or injured as a result of Project activities within a 12-month period, VCWPD will contact the Service immediately so the Service can review the Project activities to determine whether additional protective measures are needed.

6. Exclusion fences composed of silt fence material will be installed at the margins of the work area to prevent workers from encroaching into adjacent habitat and to prevent California red-legged frogs from entering the construction area. A fine mesh (less than 0.40 inch) will be used to avoid entrapment of amphibians in the silt fence. The silt fence will be monitored periodically during construction to evaluate its effectiveness. All fencing in this area will be maintained for the duration of construction and removed on Project completion.

7. To avoid attracting predators, food-related trash will be kept in closed containers and removed regularly from the Project area.

8. To avoid transferring disease or pathogens, the Service-approved biologist will follow the Declining Amphibian Populations Task Force Fieldwork Code of Practice.

9 Prior to construction, a qualified biologist will conduct training sessions to familiarize all construction personnel with the following: identification of California red-legged frogs, their habitat, general provisions and protections afforded by the Act, measures implemented to protect the species for this project, and a review of the Project boundaries. This training will also be provided within 30 days of the arrival of any new worker.

10. If an injured California red-legged frog is found, the Service-approved biologist will determine the extent of the injury. If the injury is minor and the frog is likely to survive without treatment, the biologist will document the injury and release the frog in an appropriate location previously designated by the Service; however, if the injured frog requires professional treatment to survive, the biologist will transport the frog to the location where a qualified professional can provide the needed treatment. The location of a qualified professional to assist the frog will have been documented prior to the start of construction. The treated frog will be released at an appropriate location as soon as its recovery allows. Within three working days, the injured frog incident will be reported to the Service and reported information will include date of injury, extent of injury, and action(s) taken. If a frog dies while being treated or a dead frog is located in the Project area, the Service will be contacted within three working days. At that time, the Service will provide instructions regarding the deposition of the frog.

11. VCWPD will provide the Service with a report on the results of biological surveys and sighting records and also document the following: the number of California red-legged frogs relocated from the Project area or killed or injured during the proposed project; the dates and times of capture, mortality, or injury; specific locations of capture, mortality, or injury; approximate size and age of individuals; and a description of relocation sites.

12. All areas subject to temporary disturbance will be restored on-site with native riparian species to pre-Project conditions upon completion of construction.

13. VCWPD will take measures to prevent the introduction of invasive weeds at the construction site. This will include cleaning all equipment before bringing it on-site and using only certified, weed-free erosion control and revegetation materials.

14. Standard Best Management Practices and erosion control measures will be implemented during construction to minimize possible discharge of sediment into aquatic habitats. These measures will include, but will not be not limited to, installing and maintaining silt fences immediately down gradient of disturbed areas.

Least Bell's Vireo and Southwestern Willow Flycatcher

15. To reduce adverse effects to the least Bell's vireo and southwestern willow flycatcher, VCWPD will perform all construction activities in the Ventura River bed and bank outside of their nesting season (all construction activities east of State Route SR-33 may occur year round as SR-33 presents a noise barrier from the river). Typically, construction activities would take place outside of the least Bell's vireo's nesting season, which extends from mid-March through late September, and the southwestern willow flycatcher's nesting season, which extends from mid-May through late August; however, because the Ventura River may also provide habitat to support federally listed anadromous fish species under the National Marine Fisheries Service's jurisdiction (in-water work window is June 15 through November 1), as well as the federally listed California red-legged frog under Service jurisdiction, the work window for construction activities near the Ventura River bed

and bank has been modified to August 31 to October 31 as long as the following two measures are also implemented.

a. A qualified biologist will conduct preconstruction surveys of all ground disturbance areas within riparian habitats to determine if least Bell's vireos and/or southwestern willow flycatchers are present prior to the start of construction. These surveys will be completed within two weeks prior to start of construction activities in the riparian zone. If least Bell's vireos and/or southwestern willow flycatchers are found nesting in the riparian zone during any preconstruction surveys, the qualified biologist will have stop work authority and stop construction activities in that area. Work activities would resume when the chicks have fledged and left the nest.

b. A 250-foot buffer would be maintained around the riparian zone during the month of September if any least Bell's vireos are present. After September, no buffer would be applied because least Bell's vireo would have migrated out of the area by then. Any southwestern willow flycatchers would have left the area in late August.

Measures to Avoid and Minimize Effects to Habitat for each Species

16. Disturbance to existing grades and vegetation will be limited to the actual site of the Project and necessary access routes. Placement of all roads, staging areas, and other facilities will avoid and limit disturbance to stream bank or stream channel habitat as much as possible. When possible, existing ingress or egress points will be used and the contours of the Project area will be returned to pre-construction condition or better.

17. VCWPD will, to the maximum extent practicable, reduce the amount of disturbance at a site to the absolute minimum necessary to accomplish the project. Whenever practicable, existing vegetation would be salvaged from the footprint of the Project area and stored for replanting after earthmoving activities are completed.

18. VCWPD will restore the riparian habitat permanently lost at the outlet location during Project construction Project area through planting willows and other riparian species within the Ventura River's riparian zone in areas adjacent to the Project area. Native willow species would be used for revegetation efforts. These revegetation efforts will be implemented at up to 3:1 ratio followed by a five-year monitoring period to reach an 80 percent native species cover success criterion.

4.3-4: To avoid impacts to nesting birds during construction, a qualified biologist (approved by the Ventura County Planning Department) shall be retained to conduct nesting bird surveys within suitable nesting habitat prior to initiation of construction activities. Specifically, if activities associated with construction or grading are planned during the bird nesting/breeding season, generally January through March for early nesting birds (e.g., Coopers hawks or hummingbirds) and from mid-March through September for most bird species, the applicant shall have a qualified biologist conduct surveys for active nests. Pre-construction nesting bird surveys shall be conducted weekly, within 30 days prior to initiation of ground-disturbing activities to determine the presence/absence of

active nests. The surveys shall continue on a weekly basis with the last survey being conducted no more than three days before the start of clearance/construction work. Surveys shall include examination of trees, shrubs, and the ground, within grasslands, for nesting birds, as several bird species known to the area are shrub or ground nesters. If ground-disturbing activities are delayed, additional pre-construction surveys shall be conducted so that no more than three days will have elapsed between the survey and ground-disturbing activities.

If active nests are located during pre-construction surveys, clearing and construction activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits to avoid an active nest shall be established in the field with high visibility flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the California Department of Fish and Wildlife within 30 days of completion of the pre-construction surveys and/or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

4.3-5: No earlier than 30 days prior to the commencement of construction activities, a preconstruction survey shall be conducted by a qualified biologist to determine if active roosts of special-status bats are present on or within 300 feet of the Project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California generally extends from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have dispersed, as determined by the biologist.

4.3-6: During all phases of site preparation, grubbing, grading and excavation a qualified biological monitor will be on-site. The monitor will observe all activities in the event any special-status reptiles are unearthed or otherwise observed; including, but not limited to, silvery legless lizard, western pond turtle, and two-striped garter snake. Should any wildlife be observed in harms way, the biologist will relocate them to similar suitable habitat outside of the project limits. Any necessary translocations shall be reported to the District and CDFW. The report shall include date, species, habitat condition, number of individuals, size/age, general area where relocated, and other comments as appropriate. The District acknowledges that this mitigation would not offset project-related impacts to habitat loss.

Facts in Support of Finding: Implementation of rare plant surveys as outlined in Mitigation Measure 4.3-1 would reduce impacts to special-status plant species to a less than significant level. Implementation of mitigation measure 4.3-2 would limit outlet construction activities to between August 31 and October 31, and requires that an NMFS-approved biologist monitor construction activities and intervene to prevent and/or reduce the potential of an incidental take of Southern California steelhead DPS individuals during Project construction. The measure also requires

avoidance measures and best management practices, including 'good housekeeping' practices, an employee training program prior to and during construction operations, as well as habitat restoration following construction, intended to further help prevent and/or reduce the potential of incidental take of these fish. Implementation of mitigation measure 4.3-2 would reduce potential impacts to the local population of Southern California steelhead DPS to less than significant.

Similar to mitigation measure 4.3-2, mitigation measure 4.3-3 reiterates the limit of construction activities in the Ventura River to between August 31 and October 31, and requires surveys be performed by a qualified biologist prior to the commencement of construction operations to minimize and mitigate any potential impacts to the local populations of California red-legged frog, southwestern willow flycatcher, and least Bell's vireo during Project construction. The measure also requires avoidance measures and best management practices, including construction 'exclusion' fencing, 'good housekeeping' practices and an employee training program prior to and during construction operations intended to prevent and/or reduce the potential of incidental take of these individuals. Implementation of mitigation measure 4.3-3 would reduce potential impacts to local populations of California red-legged frog, southwestern willow flycatcher, and least Bell's vireo to less than significant.

Impacts to raptor and migratory bird nesting habitat and special status bat roosting habitat would be avoided by implementing mitigation measures 4.3-4 and 4.3-5, which includes the conducting of preconstruction surveys within 300 feet of the Project disturbance boundaries (500 feet for raptors). By determining the presence/absence of raptors, migratory birds and special status bats prior to construction activities, active nests and maternity roosts can be avoided during construction and impacts to the nesting and/or breeding success of raptors, migratory birds and/or special status bats would be less than significant.

Conditions within the project site are not ideal for the silvery legless lizard, western pond turtle, and two-striped garter snake, however, because there is still a reasonable chance for their occurrence on site, at least part of the year, project impacts to these species would be considered potentially significant without mitigation. Mitigation Measure 4.3-6 would reduce these potential impacts to a less than significant level.

Ecological Communities

Construction Impacts: Construction of the proposed Project would result in temporary impacts and permanent impacts to on-site sensitive natural plant communities as discussed below.

Riparian Scrub

Riparian scrub is dominated by arroyo willow (*Salix lasiolepis*), with mule fat (*Baccharis salicifolia*) common in the understory. This community occurs at the eastern end of the action area in lower Fresno Canyon, but is most common in the Ventura River, where Fremont cottonwood (*Populus fremontii*) is also present but not dominant. Much of this community in the river is infested with giant reed (*Arundo donax*), a non-native perennial weed. Despite the influx of invasive species, because this habitat occurs within CDFW jurisdiction it is treated herein as a sensitive habitat.

Temporary impacts = 0.07 acre *Permanent impacts = 0.30 acre*

Oak-Walnut Woodland

Coast live oak (*Quercus agrifolia*) and California black walnut (*Juglans californica*) co-occur in large stands in the survey area, occurring on hills as well as along roads and easements. Native woodlands are considered sensitive by CDFW.

Temporary impacts = 0.16 acre *Permanent impacts = 0.20 acre*

Venturan Sage Scrub (= Artemisia californica shrubland alliance) (G3/S3.1)

Venturan sage scrub occurs on a hill in the southwest part of the survey area. Common species include California sagebrush (*Artemisia californica*), buckwheat (*Eriogonum fasciculatum*), coyote brush (*Baccharis pilularis*), purple sage (*Salvia leucophylla*), and toyon (*Heteromeles arbutifolia*). Sage scrub habitats are considered sensitive by CDFW as they have a rarity code of G3.

Temporary impacts = 0.05 acre *Permanent impacts = 0.03*

Though the Project impacts to some of these habitats would not necessarily be considered substantial with respect to CEQA thresholds, the Ventura County thresholds of significance state temporary or permanent loss of sensitive vegetation communities would be considered significant without mitigation.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Biological Resources related to sensitive ecological communities identified in the EIR.

Mitigation Measures

4.3-7: Areas of Oak-Walnut Woodland, and Venturan Sage Scrub that are temporarily impacted by Project development shall be replaced in kind and in-situ at a 1:1 ratio. This ratio would be considered appropriate as the existing conditions of these habitats on-site are disturbed and support numerous non-native and invasive plant species.

The replacement vegetation communities shall have similar dominant trees and native understory shrubs and herbs as the affected vegetation communities. The mitigation plan will include removal of invasive and exotic species to the degree feasible.

A habitat replacement plan shall be developed to replace, at a 3:1 ratio, areas of Riparian Scrub, and at 5:1 for Oak-Walnut Woodland, and at 2:1 for Venturan Sage Scrub permanently impacted by Project development. The plan shall specify, at a minimum, the following:

- the location of mitigation sites
- the quantity and species of plants to be planted
- procedures for creating additional vegetation communities
- methods for the removal of non-native plants
- a schedule and action plan to maintain and monitor the enhancement/restoration area

- a list of criteria by which to measure success of the mitigation sites (e.g., percent cover of native species, survivorship/establishment of plantings, wildlife use)
- measures to exclude unauthorized entry into the creation/enhancement areas; and
- contingency measures in the event that mitigation efforts are not successful.

The goal will be to create and enhance these habitat types on-site in currently disturbed areas. Through consultation with CDFW, it may also be appropriate to remove invasive species as part of the mitigation, which may alter the final mitigation ratio if approved by CDFW.

Table 4.3-4
Summary of Sensitive Community Impacts and Mitigation Ratios

Habitat Type	Temporary Impacts (acres)	Mitigation Ratio 1:1(acres)	Permanent Impacts (acres)	Mitigation Ratio 2:1 (acres)	Mitigation Ratio 3:1 (acres)	Mitigation Ratio 5:1 (acres)	Total Mitigation (acres)
Riparian scrub	0.07	0.07	0.30	0.00	0.90*	0.00	0.97
Oak-Walnut woodland	0.16	0.16	0.20	0.00	0.00	1.00**	1.16
Venturan sage scrub	0.05	0.05	0.03	0.06***	0.00	0.00	0.11
Totals	0.28	0.28	0.53	0.06	0.90	1.00	2.24

* *Mitigation will include 0.63 acre giant reed removal adjacent to work area in Ventura River and plant 20 sycamore trees (expect 10 to survive) for permanent impacts to Riparian Scrub. The balance of 0.27 acre will be through application of mitigation credits from the District's Matilija Mitigation site for a total of 0.90 acre of mitigation.*

** *Mitigation for permanent impacts to Oak-Walnut Woodlands will be accomplished at 5:1 through payment to the Ventura River Preserve Oak Savanna Restoration Project. 1.0 acre will be purchased to mitigate for 0.20 acre of Oak-Walnut Woodland habitat permanently impacted by the project.*

*** *Mitigation for permanent impacts to Venturan Sage Scrub will be accomplished at 2:1 through application of mitigation credits from the District's Matilija Mitigation site. 0.6 acre of Venturan Sage Scrub credits will mitigate for the 0.3 acre of project-related permanent impacts to this habitat.*

Facts in Support of Finding: Impacts related to the temporary loss of 0.28 acres and permanent loss of 0.53 acres of on-site sensitive natural plant communities would be reduced through implementation of mitigation measure 4.3-7. Implementation of mitigation measure 4.3-7 requiring habitat replacement would reduce Project impacts to sensitive natural plant communities to a less than significant level.

Waters and Wetlands

Construction Impacts: The proposed Project would temporarily impact 0.02 acre and 159 linear feet and permanently impact 0.02 acre and 121 linear feet of non-wetland, non-tidal Waters, confined to the inlet area of the proposed new facility. About 30 linear feet and 0.004 acre of this area is occupied by mule fat, the rest is unvegetated.

The new flood conveyance facility will alter natural drainage patterns, in the sense that base flows in lower Fresno Canyon, and most flood flows, will be directed away from their historical

course. There will also be permanent loss of riparian vegetation, assuming that the inlet and outlet areas of the new facility will need to be maintained clear of vegetation. The Project also includes placement of un-grouted rip-rap within the Ventura River. Because the Project impacts would not occur to federally protected wetlands, but rather to non-wetland, non-tidal Waters, impacts based on CEQA thresholds would be considered less than significant. However, the Ventura County Thresholds include impacts to "any" Waters and Wetlands. As such, the described impacts to Waters are considered potentially significant.

These impacts will require a water quality certification from the Los Angeles RWQCB and qualifies for a #43 Nationwide Permit for "Stormwater Management Facilities" from USACE. Additionally, the Project would incorporate most of the items listed in the Ventura County Thresholds of Significance. As such, they are considered potentially significant without mitigation.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Biological Resources related to waters and wetlands identified in the EIR.

Mitigation Measure

4.3-8: Prior to Project implementation VCWPD shall obtain a Section 401 Water Quality Certification, a Nationwide Permit from USACE and a Streambed Alteration Agreement (SAA) from CDFW. Some or all of those permits are anticipated to require specific mitigations for both temporary and permanent impacts. Implementation of Mitigation Measure 4.3-7 is anticipated to be consistent with the 401, Nationwide, and SAA mitigation requirements with respect to vegetation. However, should any agencies require conflicting mitigations in their conditions of approval, the more stringent measure shall apply.

Facts in Support of Finding: Implementation of mitigation measure 4.3-8, including the implementation of specific mitigations found in the Section 401 Water Quality Certification from USACE and the SAA from CDFW will prevent the degradation of water quality to non-wetland, non-tidal Waters downstream of the Project site. Note: because these features are not considered 'significant wetlands' and because this Project is for the purpose of flood control, the Ventura County requirement of a 100-foot buffer is not applicable. Following implementation of mitigation measure 4.3-8 impacts to waters and wetlands in the Project area would be less than significant.

Protected Trees

Construction Impacts: Local plans, policies, and ordinances germane to the proposed Project include the Ventura County Protected Tree Ordinance (Section 8107-25, Tree Protection Regulations).

The Project would require removal of five coast live oak trees and one sycamore tree and encroach within the protected zone of one additional oak tree that meet the 9.5-inch circumference (measured 4.5 feet above ground) or larger, qualification for a protected tree. Therefore, impacts are considered significant and mitigation is required.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Biological Resources as related to protected trees identified in the EIR.

Mitigation Measures

4.3-9 All removals and encroachments to native protected trees shall be mitigated for in conformance with the County of Ventura Protected Tree Ordinance.

Facts in Support of Finding: Mitigation measure 4.3-9 requires the safeguarding of protected trees within the Project construction area from encroachment and the replacement of trees qualifying as protected trees removed by implementation of the proposed Project in conformance with the County of Ventura Protected Tree Ordinance. Following implementation of mitigation measure 4.3-9 impacts to protected trees would be less than significant.

C) CULTURAL RESOURCES (FINAL EIR Section 4.4)

Archaeological Resources

Construction Impact: The Cultural Resources Technical Report prepared for the Fresno Canyon Flood Mitigation Project (FEMA/URS 2009) did not identify any archeological resources located within the Project area. Notwithstanding the low likelihood of disturbance of previously unknown buried archaeological resources during Project construction, because of the substantial amount of ground disturbance required to construct the proposed project, a consideration of the potential for encountering buried cultural resources is warranted. The deepest excavation would take place in the eastern portion of the proposed project, to the east and just west of SR-33. Other Project components, including maintenance roads, access ramps, and turnarounds, would be constructed largely on fill, with little or no subsurface disturbance. However, a potentially significant impact has been identified and mitigation is required.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Archeological Resources identified in the EIR.

Mitigation Measure

4.4-1 In the event that archaeological resources are exposed during Project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume.

Facts in Support of Finding: Implementation of mitigation measure 4.4-1 requires the cessation of construction activities in the event that ground disturbing activities discover archaeological resources, until the resource can be appropriately evaluated and treated, if necessary. Following the implementation of mitigation measure 4.4-1, by monitoring construction activities and obtaining a qualified archaeological evaluation of any discovered archeological resources, if necessary, the cultural value of any discovered archaeological resources would be retained and impacts would be less than significant.

Human Remains

Construction Impact: No evidence of human remains, including those interred outside of formal cemeteries, was discovered during the records search, literature review, field survey, or site testing and evaluation at the Project site. There is no remaining indication that the Project site was used by Native Americans for religious, ritual, or other special activities and therefore impacts to Native American burial sites are not expected. However, although no evidence was uncovered during the literature review and field survey, there is still potential that human remains may be disturbed during construction activities. Therefore, a potentially significant impact is identified and mitigation is required.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to previously unknown Human Remains identified in the EIR.

Mitigation Measure

4.4-2 If human remains are encountered during excavations associated with the proposed project, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Ventura County Coroner must be notified within 24 hours.

If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis.

Upon clearance by the coroner and the NAHC for Native American remains, construction (earthmoving) activities may resume.

Facts in Support of Finding: In the event that human remains are uncovered during ground disturbing activities, implementation of mitigation measure 4.4-2 would ensure that the appropriate agencies are contacted such that the remains are respectfully treated. By implementing mitigation measure 4.4-2, potential impacts to previously unknown human remains would be reduced to below a level of significance.

Paleontological Resources

Construction Impact: The geologic formations that differentiate the Project site are: Diablo clay (DbF), Mocho loam (MoA), and Riverwash (Rw). According to the *Initial Study Assessment Guidelines*, these soils are designated as Vaqueros Sandstone, Rincon Shale, and Holocene alluvial deposits for paleontological resources.[2] The Vaqueros Sandstone has been identified as having a moderate to high potential for paleontological resources.

Adverse impacts on paleontological resources result when rock units become unavailable for study and observation by scientists. The destruction of fossils as a result of ground disturbance has a significant impact as it makes biological records of ancient life permanently unavailable for study. While there are no known paleontological resources in the Project area, the potential exists for the discovery of previously unknown resources during ground-disturbing activities during

[2] County of Ventura, *Initial Study Assessment Guidelines*, 56.

Project construction. Therefore, a potentially significant impact is identified and mitigation is required.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Paleontological Resources identified in the EIR.

Mitigation Measure

4.4-3 In the event that paleontological resources are unearthed during Project construction, all earth-disturbing work within the vicinity of the find shall be temporarily suspended until a qualified paleontologist has evaluated the nature and significance of the find.

Facts in Support of Finding: Implementation of Mitigation Measure 4.4-3 requires the cessation of construction activities in the event that ground disturbing activities discover paleontological resources, until the resource can be appropriately evaluated and treated, if necessary. Following the implementation of Mitigation Measure 4.4-3, by monitoring construction activities and obtaining a qualified paleontological evaluation of any discovered paleontological resources, if necessary, the cultural and biological value of any discovered paleontological resources would be retained and impacts would be less than significant.

D. GEOLOGY AND SOILS (FINAL EIR Section 4.6)

Landslide / Mudflow

Construction Impact: The Project site is located along the toe of two north to north-northwest facing slopes situated between the east bank of the Ventura River and the mouth of the Fresno Canyon drainage and bisected by SR-33. The area east of SR-33 consists of a large natural/graded hillside area surrounding a debris basin and the existing Fresno Canyon drainage. The north and north-northwest facing slopes in this area are generally inclined at approximate gradients of 8:1 to locally 2:1 (horizontal to vertical) with approximately 670 feet of vertical relief from the bottom of the drainage basin to the top of the first intermediate ridge southeast of the site. North of the drainage, the site generally slopes gently toward the west at gradients of 6:1 or flatter.

West of SR-33, the alignment is situated along the toe of a relatively large north-facing slope. The slope ascends up to 90 feet from the relatively flat floodplain at gradients of 3:1 to locally as steep as 1:1. South of the alignment, between Stations 14+50 and 15+50, the slope ascends to a large retaining wall which supports the SCE substation pad. In addition, a series of stacked retaining walls are located between the southern terminus of Edison Drive and the existing SCE substation (Stations 15+73 and Station 16+00).

Based on review of available geologic maps and field exploration, the earth material underlying the site slopes consists of varying thicknesses of artificial fill, colluvium and terrace deposits over Rincon Shale bedrock. As observed during field investigation, the artificial fill, colluvium and terrace deposits along the slope face consist primarily of interlayered sands, silts and clays with varying amounts gravel, cobbles, and boulders. The underlying bedrock consists of well-bedded to massive shale and siltstone. On-site observations of the geologic structure and a review of available geologic maps indicate that the bedding is oriented from N27°W and N3°E with dips of 40° to 53° to the east and northeast. Soil and bedrock contacts likely follow general slope topography at the site and are inclined to the north and northwest.

Based on this information, the bedrock will likely exhibit neutral bedding conditions with respect to proposed north and south facing excavations so long as the bedrock follows observed and regional trends. However, proposed north and south facing excavations will remove lateral support of the overlying surficial soils which may become susceptible to raveling and sloughing. Proposed north facing excavations will also expose an unfavorable bedding condition that exists along the soil and bedrock contact. In addition, erosion and minor surficial stability may be encountered along the adjacent slopes steeper than 2:1 during construction. Excavations within the surficial soil will likely require special excavation measures to maintain stability during construction. As such, a potentially significant impact is identified and mitigation is required.

Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Geology and Soils as related to potential landslides or mudflows identified in the EIR.

Mitigation Measures

4.6-1 Project plans and specifications, and other pertinent documents, shall be prepared in accordance with the recommendations provided in the Project geotechnical report prepared by Geocon West, Inc., with particular regard to subsidence mitigation as follows:

4.6-1.1 The in-situ soils and bedrock can be excavated with moderate effort using conventional excavation equipment. The upper portions of the bedrock are moderately weathered and highly fractured. Medium to heavy-duty excavation equipment may be required if thick zones of well-cemented bedrock or clasts over 4-feet in size are encountered. Caving and sloughing should be anticipated in unshored vertical excavations, especially where loose, granular, or uncemented soils are encountered.

4.6-1.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and stability of adjacent existing improvements.

4.6-1.3 All on-site excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping and shoring. Temporary sloping and shoring recommendations Geocon West, Inc. report, January 17, 2013.

Facts in Support of Finding: Mitigation measure 4.6-1 requires implementation of the recommendations provided in the geotechnical report prepared by Geocon West, Inc., for the proposed project, including appropriate excavation and shoring techniques and the adherence to applicable OSHA rules and regulations to maintain the safety and stability of adjacent existing improvements. Implementation of mitigation measure 4.6-1 will reduce impacts to a less than significant level.

Expansive Soils

1. **Construction Impact:** During site surveys for the preparation of the Project geotechnical report, soil samples were collected for evaluation of various factors, including expansion potential. Laboratory testing was performed on representative samples of site soils to generally evaluate the soil expansive potential. The 2010 California Building Code (CBC) Section 1803.5.3 defines soils with an expansive potential of less than 20 as "non-expansive," and greater than 20 as "expansive." Based on the laboratory test results, the existing site soils and bedrock have a "low" to "very high" expansive potential and are classified as "expansive." The recommendations in the geotechnical report are based on consideration that the existing soils are expansive at proposed slab and foundation locations. The possibility that foundations and slabs may derive support in engineered fill comprised of a blend of soils and bedrock has also been accounted for. As such, a potentially significant impact is identified and mitigation is required.

   Finding: Pursuant to *State CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to geology and soils as they relate to expansive soils identified in the EIR.

   Mitigation Measures

   4.6-2 Project plans and specifications, and other pertinent documents, shall be prepared in accordance with the recommendations provided in the Project geotechnical report prepared by Geocon West Inc., 2013 with particular regard to expansive soil mitigation as follows:

   4.6-2.1 To aid in earthwork quantity estimates, estimates were made of the amount of volume shrinkage and bulking expected from on-site, in-situ volumes to compacted soil volumes. Average in-situ soil density and moisture content and maximum dry density were based on American Society for Testing and Materials (ASTM) D1557 test procedure. The following table presents the shrinkage and bulking factors to be anticipated when excavating and compacting the earth materials per the recommendations of the Geocon West Inc., 2013 report.

Material	Shrinkage (-)/Bulking (+) Factors
Artificial Fill (Af)	-5% to -10%
Colluvium (Qcol)	-4% to +6%
Holocene Age Terrace Deposits (Qht)	+5% to +10%
Pleistocene Age Terrace Deposits (Qht)	-5% to -10%
Rincon Shale (Tr)	-10% to +10%

   4.6-2.2 It should be understood that volume shrinkage factors presented above are estimates only and are based on a limited number of soil samples. Actual volume changes can vary from our estimates due to variations in soil density, moisture content, and the degree of compaction achieved during grading. Removal of oversize materials and deleterious materials may result in a higher shrinkage factor based on loss of material.

Facts in Support of Finding: Mitigation measure 4.6-2 requires implementation of the recommendations provided in the geotechnical report prepared by Geocon West, Inc., for the proposed project, including the identification and estimation of amounts of expansive soils present within the proposed Project work area and the recommendation for their removal. Implementation of mitigation measure 4.6-2 will reduce impacts to a less than significant level.

E. PROJECT ALTERNATIVES

The *State CEQA Guidelines* require an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (*State CEQA Guidelines* §15126.6(a)). The *State CEQA Guidelines* direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the "rule of reason" which requires an EIR to include only those alternatives necessary to permit a reasoned choice. In addition to specifying that the EIR evaluate "a range of reasonable alternatives" to the project, § 15126.6(c) of the *State CEQA Guidelines* requires that an EIR identify any alternatives that were considered but were rejected as infeasible. The initial planning study Fresno Canyon Flood Mitigation Pre-Design Study Final Report (Hawks & Associates, 2007) developed a range of conceptual alternatives. The objective of the pre-design study was to conceptually identify a range of potential alternatives that would be screened to the most feasible alternatives. The following is a description of the conceptual alternatives identified in the study and a brief discussion of why they were rejected from further consideration and analysis in the EIR.

Alternatives Eliminated from Further Consideration

Purchase of At-Risk Properties

Approximately 46 residences in the community of Casitas Springs would be affected by the Fresno Canyon floodplain during a 100-year storm event. Under this alternative, these parcels would be purchased in order to remove residents from the danger of flooding, or residents could choose to relocate voluntarily.

Project Related Impacts: As no construction would take place, this alternative would reduce potential impacts relating to other issue areas including air quality, biological resources, cultural resources, and geology and soils, compared to the proposed project.

Project Objectives: This alternative would meet some of the objectives of this Project (i.e., the protection of residents from flood flows); however, as the proposed flood channel improvements would not be constructed, this alternative would not protect local properties nor minimize impacts to SR-33 from emergency closings due to flooding, as well as periodic debris flows causing ongoing maintenance problems.

Conclusion: This alternative is rejected because it would not be economically feasible (the estimated cost of acquiring all 46 residences is over $20 million) and it lacks community support.

Elevate Residences

Under this alternative, instead of purchasing the properties, at-risk homes could be raised to elevations higher than the Fresno Canyon and Ventura River 100-year floodplain elevations. Elevating a house means raising its lowest floor above the flood protection elevation (FPE), a level at which the chances of flooding are greatly diminished or eliminated. The FPE includes 1 additional foot of elevation to compensate for the uncertainties that exist in expected flood elevations. At a cost of approximately $50,000 per house for a total of $2.3 million, this may be the least expensive alternative.

Project Related Impacts: As limited local construction would take place, this alternative would reduce potential impacts relating to other issue areas including biological resources, cultural resources, and geology and soils, compared to the proposed project. However, construction impacts to air quality, noise, and transportation and circulation may still occur.

Project Objectives: This alternative would meet some of the objectives of this Project (i.e., the protection of residents from flood flows); however, as the proposed flood channel improvements would not be constructed, this alternative does nothing to eliminate potential road closures resulting from flood events. It would not meet the Project objective of minimizing impacts to SR-33 since the highway would still be subject to frequent flooding events. Debris cleanup on streets and properties would remain an ongoing maintenance problem.

Conclusion: This alternative is rejected because it would not reduce impacts to SR-33 since the highway would still be subject to frequent flooding events and would therefore be subject to emergency closures and ongoing maintenance problems.

Floodwall System in place of Existing Channel

Under this alternative, a 50-foot bottom width trapezoidal earthen channel would replace the existing concrete channel and floodwalls constructed to augment capacity, allowing open channel drainage from SR-33 directly out to the Ventura River. The use of a large open channel and floodwalls in this alternative would eliminate the need for an upstream debris basin. The floodwalls would be 100 feet apart and approximately 6 feet tall. This route would require purchasing three to four residential lots for right-of-way and would require the construction of a new longer and higher bridge on SR-33 (60-feet wide with a free span of 50 feet) and a new road from SR-33 to the south end of Edison Drive. The Ojai Valley Trail crossing would also have to be modified. The estimated cost of this alternative is $5.8 million.

Project Related Impacts: Due to the additional excavation and construction beyond that proposed by the project, this alternative would result in greater impacts to scenic resources, air quality, biological resources, cultural resources, geology and soils, land use, noise, transportation and circulation and surface water quality.

Project Objectives: This alternative would meet most of the objectives of the proposed project; however it would cause a new significant land use impact.

Conclusion: This alternative was eliminated from further consideration primarily since the floodwall system would create a permanent, physical division within the established community.

Alternative Debris Basin Locations

Several debris basin locations were explored, using field observations, aerial photography, and topographic mapping, as shown in Figure 5.0-2 in the Draft EIR. Based on engineering, geotechnical, and environmental considerations, the following sites were eliminated from further consideration and analysis:

- **Site "A"** situated just upstream of SR-33, was eliminated due to its lack of sufficient volume, proximity to a major gas pipeline, and the need to acquire a residential property.
- **Site "C"** situated 2,500 feet upstream from the Ventura River is the only location that could provide 21.85 acre-feet of storage capacity, or 100 percent of the 100-year frequency unburned sediment design volume. However, it was eliminated from further consideration because the remote location would have difficult construction and maintenance access, increased environmental impact, and would provide no protection from debris slides downstream of this location. A geotechnical investigation concluded that there is a large area of unstable hillside downstream of this location.

Project Related Impacts: These alternatives would result in greater impacts to scenic resources, air quality, biological resources, cultural resources, geology and soils, noise, transportation and circulation, and surface water quality.

Project Objectives: These alternatives would meet most of the objectives of the proposed project; however they would potentially cause new significant impacts related to hazards due to the proximity of a gas pipeline and geology and soils.

Conclusion: These alternatives were eliminated from further consideration due to insufficient debris storage volume, proximity to a major gas pipeline, the need to acquire additional residential property and unstable soil conditions.

Small Debris Detention Basins with Sediment Control Structures

Under this alternative, a series of approximately 10 small debris basins would be used as sediment control structures along the unimproved portion of Fresno Canyon to reduce the amount of sediment that currently enters Casitas Springs. The sediment control structures could be constructed from grouted rock, and would be placed incrementally in the canyon upstream of SR-33. However, access to these basins would be difficult, as both sides of the canyon are unstable and unsuitable for road construction. Furthermore, debris from the large area of unstable hillside mentioned above would easily overwhelm a smaller debris basin.

Project Related Impacts: Due to the additional number of debris basins and a larger area of construction disturbance, this alternative would result in greater impacts to scenic resources, air quality, biological resources, cultural resources, geology and soils, noise, transportation and circulation, and surface water quality.

Project Objectives: This alternative would meet most of the objectives of the proposed project; however debris cleanup from the smaller basins may present an ongoing maintenance problem.

Conclusion: This alternative was eliminated from further consideration because access to these basins would be difficult, as both sides of the canyon are unstable and unsuitable for road construction. Furthermore, debris from the large area of unstable hillside mentioned above would easily overwhelm a smaller debris basin.

Alternatives Evaluated in the EIR

Alternative 1 - No Project Alternative

Under this alternative, the proposed Project would not be constructed. Existing flood control facilities would continue to operate, but no new facilities would be constructed.

Project Related Impacts: The No Project Alternative would reduce Project impacts related to scenic resources, biological resources, cultural resources, geology and seismic hazards, noise and vibration, transportation and circulation, utilities, surface water quality, and recreation. The No Project Alternative would cause impacts greater than the proposed Project for flood control facilities and hydraulic hazards.

Project Objectives: This alternative would not achieve the following objectives identified for the proposed project:

- Flood protection – improve storm flow conveyance from Fresno Canyon to provide capacity for 100-year fully bulked flood flows to protect residents and properties in Casitas Springs;
- Minimize emergency closings due to flooding impacts to SR-33, since SR-33 is a major arterial between the Ojai Valley and Hwy 101 in Ventura.

Conclusion: This alternative was eliminated from consideration since the No Project Alternative does not provide new facilities to ensure sufficient flood protection to the community of Castaic Springs or prevent emergency closings, as well as ongoing maintenance issues due to flooding impacts to SR-33.

Alternative 2 - Extended Box Culvert and Open Channel

The Extended Box Culvert and Open Channel Alternative (Alternative 2) would convey flow in a 625-foot-long closed box culvert, taking a direct route through a hillside and under SR-33 to a point west of Edison Drive. From there an open concrete lined channel would convey flow to the Ventura River following a route similar to the proposed project. The existing Fresno Canyon channel would be preserved and used for local drainage and as a secondary path for flood flows. Figure 5.0-1, Alternative 2 Design in the Draft EIR, illustrates the location and orientation of this alternative.

The entire length of the facility under Alternative 2 would be approximately 1,400 feet and would comprise (from upstream to downstream) an entrance structure approximately 300 feet long, a box culvert approximately 625 feet long, a 12-foot-wide rectangular channel approximately 270 feet long, an approximately 40-foot-long ungrouted rock riprap outlet to the Ventura River, and a graded flow path approximately 70 feet long. Alternative 2 would require traffic detour during open trench method installation of the concrete box culvert under SR-33.

The channel would discharge into the Ventura River just west of the Ojai Valley Trail. A 30-foot-long (12 feet wide by 9 feet high) box culvert would be constructed below the Ojai Valley Trail. A 120-foot-long by 5-foot-deep by 6-inch-wide reinforced concrete cutoff wall would be installed along the western edge of the Ojai Valley Trail beginning about 70 feet north of and ending about 35 feet south of the conveyance structure.

Alternative 2 would also include two maintenance roads. One maintenance road would be approximately 500 feet long and located immediately north of the open rectangular channel. An additional 100 feet of the maintenance road would be constructed on top of the culvert and then run north where it would terminate in an access ramp approximately 100 feet long with a 10 percent grade. The maintenance road would be 15 feet wide for most of its length and would culminate at the Ojai Valley Trail at its western end. A private access road would be incorporated into the maintenance road for use by a neighboring property owner. A fence would be built around the access road to prevent public access to the facility.

The second maintenance road would be constructed at the eastern end of the facility and immediately north of the entrance structure. It would be approximately 400 feet long and connect to an existing access route from SR-33.

Gas, water, electricity, sewer, and drainage conduits that cross Alternative 2 would be relocated or avoided as part of the proposed project. A 20-inch-diameter high-pressure gas line runs parallel to and east of SR-33 where it crosses Fresno Canyon. The box culvert would pass under this conduit with approximately 6 feet of clearance. Two smaller gas lines (6-inch-diameter and 10-inch-diameter) within the SR-33 right-of-way would require relocation. The water lines that exist in the area would be avoided. The most costly utility relocation would involve approximately 307 linear feet of 21-inch trunk sewer operated by the Ojai Valley Sanitary District. This sewer line would be relocated approximately 12 feet northward and the materials would be upgraded to ensure future access and reduce the risk of maintenance problems.

The outlet apron, cutoff wall, rock riprap bank protection, and flapgate installation would be the same under Alternative 2 as described for the Proposed Project in Section 3.0 of the Draft EIR. The construction duration of Alternative 2 would be slightly longer than for the proposed project, due to the complexity of constructing the box culvert underneath SR-33 and the associated traffic detouring.

Project Related Impacts: Alternative 2 would result in similar impacts for scenic resources, air quality, flood control facilities, greenhouse gas emissions, hydrology and flooding, noise and vibration, surface water quality, and recreation, when compared to the proposed project. However, greater impacts would occur for biological resources, cultural resources, transportation and circulation, and utilities.

Project Objectives: This alternative would not meet the following objective identified for the project:

- Minimize impacts to SR-33, both emergency closings due to flooding and potential temporary impacts during Project construction, since SR-33 is a major arterial between the Ojai Valley and Hwy 101 in Ventura.

Conclusion: Alternative 2 was eliminated from consideration since it would not prevent emergency closings or ongoing maintenance issues due to flooding impacts to SR-33.

Alternative 3: Debris Basin Alternative

Under the Debris Basin Alternative (Alternative 3), a debris basin would be constructed in Fresno Canyon, approximately 600 feet upstream of the entrance to the existing concrete channel at SR-33. Due to slope instabilities in the flanking canyon walls, excavation of a pit-type basin would not be possible. Instead, a small dam and spillway would be designed to create the basin. The height of the dam would be less than 25 feet (measured from the toe to the spillway crest) in order to keep it below "state-size" jurisdiction. Because of this height and other topographical limitations, the basin would have a storage capacity of 17 acre-feet or 27,400 cubic yards, which would not meet the design storage capacity of 35,255 cubic yards required for the Q100 unburned sediment yield. Since this basin volume would be only 78 percent of the needed capacity, the outlet structure for the basin would be a 13-foot tall, 30-foot by 10-foot concrete box riser designed to allow passage of approximately 22 percent of the sediment to the downstream reaches. The pressure pipe outlet at the base of the riser structure would need to accommodate the passage of the bypassed sediment.

The debris basin would be designed to meet the following parameters: height of structure = 25 feet; elevation of toe of dam = 289 feet; elevation of top of dam = 320 feet; elevation of spillway crest = 314 feet; excavation below existing channel invert = 2 to 9 feet; length of spillway crest = 70 feet; and total capacity with excavation = 17 acre-feet. The pressure pipe would consist of a circular steel pipe sized to convey

1,450 cubic feet per second, which is approximately 22 percent greater than the clear Q-100 calculated at this location. From the basin outlet to SR-33, the pipe would follow an alignment near the existing riverbank alignment, and from SR-33 to the Ventura River it would follow the existing open channel alignment running west through Casitas Springs. The outlet would be designed for a high level of energy dissipation. Figure 5.0-2, Alternative 3 Design in the Draft EIR, illustrates the location and orientation of this alternative, with the debris basin located at Site B.

Project Related Impacts: Alternative 3 would reduce Project impacts related to scenic resources, noise and vibration, utilities, and recreation, while increasing impacts related to flood control facilities, and hydrology and flooding impacts. Impacts for air quality, biological resources, cultural resources, geology and seismic hazards, greenhouse gas emissions, transportation and circulation, and surface water quality would be similar to those of the proposed project.

Project Objectives: Alternative 3 would not meet the following objective identified for the proposed project:

- Flood protection – improve storm flow conveyance from Fresno Canyon to provide capacity for 100-year fully bulked flood flows to protect residents and properties in Casitas Springs.

Conclusion: Alternative 3 was eliminated from consideration since it would not improve storm flow conveyance from Fresno Canyon to provide capacity for 100-year fully bulked flood flows to protect residents and properties in Casitas Springs.